ISSN 0703-8763

Edmonton Area Series Report No. 70

The Utilization of Prescription Medicines, Nonprescription Medicines and Alternative Health Care Therapies

By

Herbert C. Northcott

&

John A. Bachynsky*

*Faculty of Pharmacy
University of Alberta

Population Research Laboratory
Department of Sociology
The University of Alberta

Acknowledgement: The Alberta Survey (formerly All Alberta Study) includes the Edmonton Area Study and is administered and supported by the Population Research Laboratory and the Department of Sociology at the University of Alberta. Erica van Roosmalen provided helpful suggestions. Research assistance was provided by Robert Lewis.

AUGUST 1990

92-05723/

The Utilization of Prescription Medicines, Nonprescription Medicines and Alternative Health Care Therapies

ABSTRACT

This study examines the use of prescription medicines, nonprescription medicines and alternative health care therapies in Edmonton, Alberta in 1979 (n=439) and again in 1988 (n=307). While the usage of prescription medicines was unchanged from 1979 to 1988, utilization of nonprescription medicines and alternative health care therapies increased. Usage of self-administered and alternative therapies appears to be broadly based with users representing a socio-demographic cross-section of the population.

The Utilization of Prescription Medicines, Nonprescription Medicines and Alternative Health Care Therapies

The utilization of prescription and nonprescription medicines in Canada has been relatively well documented [1-2]. However, less is known about the utilization of alternative health care therapies typically not offered by the medical doctor [3]. This study examines the use of prescription medicines, nonprescription medicines and alternative therapies in an urban population at two points in time. It is hypothesized that there will be evidence of increasing usage of nonprescription medications and alternative therapies and that the users of nonprescription medications and alternative therapies will constitute relatively distinct socio-demographic groups.

METHODS

Representative samples of adult Edmontonians were interviewed face-to-face in February of 1979 (n=439) and again in February of 1988 (n=307). Both of these studies were done as part of the annual Edmonton Area Survey. Respondents in both 1979 and 1988 were asked: "How many different kinds of prescription medicines have you used in the past week? and "Have you used any of the following nonprescription medicines in the past week: pain relievers such as aspirin, stomach remedies or medicines, laxatives, cough or cold remedies, skin ointments or salves, and vitamins or minerals?" Respondents in 1988 were also asked if they had used herbal remedies in the past week while respondents

in 1979 were asked if they had used herbal remedies in the past year. In addition, respondents in 1988 were asked "Have you in the past twelve months used any of the following: chiropractic treatment, hypnotherapy, psychological therapy, meditation (e.g. T.M.), megavitamin therapy, Ayurvedic medicine, acupuncture/acupressure, imaging/visualization, holistic health care/homeopathy/ naturopathy, zone therapy/reflexology/reflex therapy, mind control/mind awareness/mind development, psychic/spiritual/Yogic healing, other?" This same question was asked in 1979 except that the list of therapies varied somewhat. Psychological therapy, megavitamin therapy, Ayurvedic medicine, imaging/visualization and holistic health care were not included in the 1979 questionnaire and meditation (e.g. T.M.) was listed simply as T.M. in 1979. Finally, the following socio-demographic characteristics were measured: age (18-29, 30-59, 60+ years of age), sex, marital status (married/common law, never married/widowed/divorced/ separated), employment status (currently employed or not), education (12 years or less, 13 years or more), own or rent accommodation, and household income (split into two groups according to the median income, i.e. at $36,000 in 1988 and at $20,000 in 1979).

The data are presented in the form of percentage distributions and in tables which summarize the results of cross-tabulations (i.e., cross-tabulation of utilization of prescription medicines, nonprescription medicines, herbal remedies, chiropractic and the more frequently used

mental therapies -- meditation, mind control/awareness/ development, psychic/spiritual/Yogic healing, imaging/visualization, and psychological therapy -- with age, sex, marital status, employment status, education, own/rent, and household income). Statistical significance is determined by Chi Square (X^2).

FINDINGS

In 1988, 34.2% of respondents had used at least one prescription medicine in the previous week. This statistic is virtually unchanged from 1979's figure of 33.6%. Table 1 shows that the weekly usage of nonprescription medicines (pain relievers, stomach medicines, laxatives, cold remedies, skin treatments, vitamins or minerals) increased from 1979 to 1988 with 58.2% of the population using at least one nonprescription medicine in the previous week in 1979 compared to 66.4% in 1988 ($X^2 = 5.44$; $p < .05$). Moreover, the levels of increased usage for specific types of medication tended to be substantial especially for cold remedies ($X^2 = 7.53$; $p < .01$), skin treatments ($X^2 = 7.11$; $p < .01$), and pain relievers ($X^2 = 6.14$; $p < .05$). The use of stomach medicines, vitamins and minerals, and laxatives also rose, although the increases were not significant statistically. Usage of herbal remedies in the <u>previous twelve months</u> was reported by 3.2% of respondents in 1979. Usage of herbal remedies in the <u>past week</u> was

reported by 3.3% of respondents in 1988. While these data are not directly comparable, they do suggest increased usage. (Megativamin therapy was used by 1.1% of respondents in 1988, but no comparison was available for 1979).

Turning to alternative therapies, Table 2 shows the percentages of respondents in 1979 and 1988 using selected therapies at least once in the past twelve months. Chiropractic was the most widely used. Other therapies used by at least 2.5% of respondents were imaging/visualization, meditation, psychological therapy, mind control/awareness/development, and psychic/spiritual/Yogic healing. Generally, utilization of these therapies appeared to increase from 1979 to 1988 although these trends were not significant statistically. In 1979, 15.7% of respondents reported that they had used at least one alternative therapy in the previous twelve months. In 1988, users constituted 20.8% of respondents, a 32.5% increase ($X^2 = 3.24$; $p < .08$). While the specific lists of therapies used in the questionnaires were somewhat different in 1979 and 1988; nevertheless, the lists are made comparable by the use of an "other" category in both years.

It was hypothesized that the users of nonprescription medicines and of alternative therapies would constitute distinct socio-demographic groups in the population. Table 3 summarizes a series of cross-tabulations designed to identify the characteristics of users of selected groups of therapies including prescription medicines, nonprescription

TABLE 1

Percentage of Respondents Using Nonprescription Medicines in the Past Week, 1979 and 1988

Nonprescription Medicines	Percentage Users 1979	1988	Percentage Increase
Pain relievers such as aspirin	26.7	35.1	31.5*
Stomach remedies or medicines	6.8	8.4	23.5
Laxatives	3.4	3.7	8.8
Cough or cold remedies	7.5	13.6	81.3**
Skin ointments or salves	8.4	14.7	75.0**
Vitamins or minerals	30.8	34.3	11.4
Total using nonprescription medicines[1]	58.2	66.4	14.1*
n	438	307	

* Chi Square $p \leq .05$; ** Chi Square $p \leq .01$.

1. Figures do not sum to total because respondents could select more than one category.

TABLE 2

Percentage of Respondents Using Selected Therapies
in the Past Twelve Months, 1979 and 1988

Therapy	Percentage Users 1979	1988	Percentage Increase*
Chiropractic treatment	8.2	10.8	31.7
Mind Control/awareness/development	2.5	3.0	20.0
Psychic/Spiritual/Yogic healing	2.5	2.8	12.0
Zone therapy/Reflexology/Reflex therapy	1.1	1.5	36.4
Hypnotherapy	0.5	0.9	80.0
T.M.	1.1	--	
Meditation (e.g. T.M.)	--	4.3	
Homeopathy/Naturopathy	0.9	--	
Homeopathy/Naturopathy/Holistic health	--	1.5	
Acupuncture	0.9	--	
Acupuncture/Acupressure	--	0.9	
Psychological Therapy	--	3.9	
Imaging/Visualization	--	4.3	
Other[1]	2.1	1.5	
Total using alternative therapies[2]	15.7	20.8	32.5
n	439	307	

1. Responses to the other category are not directly comparable for 1979 and 1988 due to differences in lists of therapies.

2. Figures do not sum to total because respondents could select more than one category.

* None of the percentage increases were significant at the $p \leq .05$ level.

medicines, herbal remedies, chiropractic, and the more commonly used mental therapies (imaging/visualization, meditation, psychological therapy, mind control/awareness/development, and psychic/spiritual/Yogic healing). Females in both 1979 and 1988 were more likely to use prescription and nonprescription medicines, and in 1988 were also more likely to use the mental therapies. Older persons were more likely to use prescription medicines in both 1979 and 1988 but were less likely to use nonprescription medicines in 1979. (By 1988, older persons were more likely to use nonprescription medicines; however, this pattern was not statistically significant). Usage of chiropractic and herbal remedies did not show any consistent age-related pattern. However, the nonelderly in 1988 were more likely to use the various mental therapies than were the elderly. With respect to marital status, those persons who were not currently married were significantly more likely to use prescription and nonprescription medications in 1988. The relationship of marital status to the use of chiropractic, herbal remedies, and mental therapies was less distinct. Similarly, those persons not currently employed were more likely to use prescription medicines but this variable made little difference to the use of other therapies. Education had little impact on usage except that the better educated were more likely to use the mental therapies in 1979. Owning versus renting one's accommodation had no significant effect while below average

household income predicted higher usage of prescription medicines in 1988, lower usage of nonprescription medicines in 1979, but had no significant effect on the utilization of the other therapies.

In summary, Table 3 indicated that there were socio-demographic differences regarding the usage of prescription medicines. Users were more likely female, elderly, not currently married, not currently employed and tended to have below average household income. It was hypothesized that users of nonprescription medicines and of the alternative therapies would also constitute distinct population subgroups. However, the data in Table 3 fail to support this hypothesis. That is, with the exception that females were significantly more likely to use nonprescription medicines, patterns of usage for nonprescription and alternative therapies tended to be insignificant statistically and/or tended to vary inconsistently from 1979 to 1988. In other words, users of nonprescription and alternative therapies constituted a cross-section of the population and were not readily distinguishable from non-users in terms of their socio-demographic characteristics.

DISCUSSION

This study has several limitations. First of all, generalizability beyond Edmonton must be tentative. Secondly, while substantial numbers of people were surveyed,

TABLE 3
Percentage of Respondents Using Selected Therapies, by User Characteristic, 1979 and 1988

Characteristics of Users	Percentage Users of Selected Therapies									
	Prescription Medicines (past week)		Nonprescription Medicines (past week)		Chiropractic (past 12 mo.)		Herbal Remedies (past 12 mo.)	(past week)	Mental Therapies[1] (past 12 mo.)	
	1979	1988	1979	1988	1979	1988	1979	1988	1979	1988
Sex										
Female	44.3***	44.9***	66.2***	73.3**	6.9	13.1	4.3	4.2	4.8	14.0*
Male	21.7	23.2	49.3	59.6	9.6	8.3	1.9	1.8	5.8	7.5
Age										
18-29	31.0***	26.8***	63.9**	60.9	7.6	8.7	5.7*	1.4	7.6	10.1*
30-59	28.6	30.2	58.0	68.2	7.0	12.9	1.5	3.5	5.0	13.7
60+	53.9	64.3	46.1	72.9	13.0	7.1	2.6	4.3	1.3	1.4
Marital Status										
Married	32.0	30.3*	59.5	61.2**	9.6	9.2	2.2	2.8	5.6	9.6
Not Married	36.3	39.3	56.2	72.9	5.9	12.6	4.7	3.3	4.7	12.1
Employment Status										
Employed	29.2***	27.6***	59.8	66.6	8.2	12.0	1.8**	3.8	6.0	13.0
Not Employed	41.9	44.8	55.1	66.7	7.7	8.6	5.8	1.7	3.8	7.5
Education										
12 Years or Less	36.1	35.2	57.1	63.8	9.5	11.1	2.6	3.0	2.2***	7.5
13 Years or More	31.0	33.6	59.6	68.7	6.9	10.6	3.9	3.0	8.9	13.2
Own/Rent										
Own	32.7	33.5	57.1	67.8	9.3	11.0	3.1	4.1	4.8	8.2
Rent	34.1	35.2	59.8	65.3	7.2	10.5	3.3	1.8	5.7	13.7
Household Income										
Above Median	27.3	27.5**	65.7**	65.9	7.6	11.5	2.3	3.8	5.2	8.8
Below Median	34.5	39.3	52.2	69.3	10.1	10.7	3.9	2.9	5.6	13.5

Chi Square: *** p<.01 ** p<.05 * p<.10

1. 1979: Transcendental meditation, mind control/awareness/development, and psychic/spiritual/Yogic healing. 1988: meditation, mind control/awareness/development, psychic/spiritual/Yogic healing, imaging/visualization, and psychological therapy.

nevertheless, some of the alternative therapies were used rather infrequently. Further research would benefit from a much larger sample.

This study has shown that pharmaceuticals are widely used. One-third of respondents reported using prescription medication in the past week. Twice as many, some two-thirds of respondents, reported using nonprescription medication in the past week. Of particular importance is the high and increasing rate of use of self-administered pharmaceuticals in the population.

As was expected the proportion of the population using prescription medication increased with age. In 1979, the use of nonprescription drugs decreased with increasing age; however, the 1988 data indicated no statistically significant relationship between the use of nonprescription medication and age. It appears that the majority of elderly persons are likely to be using both prescription and nonprescription medication. The increased use of medication in a population more sensitive to drug effects increases the risk of adverse reactions [4].

Use of alternative therapies such as chiropractic, herbal remedies, and various mental therapies is less widespread than pharmaceutical usage. Of these alternative therapies, chiropractic is the most commonly utilized (chiropractic treatment is covered by Alberta's medical care insurance program). While alternative therapies are used infrequently, nevertheless, usage appears to be increasing.

This study suggests that there is increased usage of health care remedies which are typically not under the control of the medical doctor. Edmontonians appear to be increasingly likely to self-administer available remedies and therapies and to seek out health care practitioners other than the conventional physician. Further, this increased usage of self-administered and alternative therapies appears to be broadly based with users representing a socio-demographic cross-section of the population (for similar findings, see [3,5-7]).

REFERENCES

1. Health and Welfare Canada. Canada's Health Promotion Survey: Technical Report. Ottawa: Minister of Supply and Services Canada, 1988.
2. Canada Health Survey. The Health of Canadians: Report of the Canada Health Survey. Ottawa: Minister of Supply and Services Canada, 1981.
3. Verhoef MJ, Sutherland LR, Brkich L. Use of alternative medicine by patients attending a gastroenterology clinic Can Med Ass J 1990; 142:121-125.
4. McKim WA, Mishara BL. Drugs and Aging. Toronto: Butterworths, 1987.
5. Berger DP, Obrist R, Obrecht JP. Tumorpatient und paramedizin. Versuch einer charakterisierung von anwendern unkonventioneller therapieverfahren in der onkologie Dtsch Med Wochenschr 1989; 114: 323-330.
6. Furnham A, Smith C. Choosing alternative medicine: A comparison of the beliefs of patients visiting a general practitioner and a homeopath Soc Sci Med 1988; 26:685-689.
7. Stenager EN, Stenager E, Knudsen L, Jensen K. Traditional og alternative behandling af sklerosepatienter Ugeskr Laeger 1989; 151:3402-3404.

EDMONTON AREA SERIES REPORTS

54. Mixed Motivation for Migration in the Urban Prairies: A Comparative Approach.
Raymond F. Currie and Shiva S. Halli. October 1987.

55. Drunk-Driving Intervention in an Urban Community: An Exploratory Analysis.
Akin Adebayo. October 1987.

56. Migration to a Canadian Metropolitan City: Characteristics and Motives.
Akin Adebayo. November 1987.

57. Factors Antecedent to Impaired Driving: A Research Note.
Akin Adebayo. January 1988.

58. All Alberta Study 1988 (Including The Edmonton Area Study) Sampling Report.
Cliff Kinzel and Akin Adebayo. May 1988.

59. Recent Trends in Public Support for Unions.
Graham S. Lowe and Harvey Krahn. May 1988.

60. Item Order Effects on the Measurement of Abortion Attitudes: A Quasi-Experimental Design.
Elisabeth TenVergert, Michael W. Gillespie and Johannes Kingma. July 1988.

61. Male Attitudes Toward Abortion: An Analysis of Urban Survey Data.
Akin Adebayo. August 1988.

62. The Measurement of Interspousal Physical Aggression: Using the Conflict Tactics Scale in Survey Research.
Elisabeth TenVergert, Michael W. Gillespie, and Johannes Kingma. August 1988.

63. Private-Sector Unions' Decline in North America: A Paradigmatic Explanation.
Yonatan Reshef and Alan I. Murray. October 1988.

64. Telephone and Face-to-Face Interviewing: A Comparison.
N.M. Lalu. November 1988.

65. All Alberta Study 1989 (Including The Edmonton Area Study) Sampling Report.
Cliff Kinzel. June 1989.

66. Public Opinion Regarding AIDS Policy: Fear of Contagion and Attitude Toward Homosexual Relationships.
Herbert C. Northcott and Linda Reutter. December 1989.

67. Public Opinion Regarding the Economic Support of Seniors.
Herbert C. Northcott. April 1990.

68. Graduate Training in Survey Research: The Potential of Area Studies.
D.R. Forde, D. Odynak, R. Currie, and H. Krahn. May 1990.

69. 1990 All Alberta Study (Including The Edmonton Area Study) Sampling Report.
Cliff Kinzel and David Odynak. June 1990.